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REMARKS

Entry of this response under 37 C.F.R. §1.116 because no new claims or issues are raised and the only claim amendments being existing dependent claim matter into the independent claims.

Claims 2-4, 6,-8, 10, 11, 13, 15, 16, and 18 are all the claims presently pending in the application.

Claims 1, 5, 9, 12, 14, and 17 are withdrawn as non-elected, but subject to rejoinder pending determination of allowability of generic claims. It is further brought to the Examiner's attention that species are required to be mutually exclusive. The two species identified by the Examiner can clearly be used together. Applicant also does not agree with the Examiner characterization of which claims are generic, even if the two species were considered appropriate, since claim 1 also applies to either or both species.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 11 and 16 are rejected under 35 U.S.C. §112, second paragraph. Claims 2-4, 6-8, 13, and 18 stand rejected under 35 U.S.C. § 103(a) under HILLHOUSE, et al. (U.S. Patent Application Publication No. US 2002/0154793) (hereinafter Hillhouse) in view of Luke (U.S. Patent No. 7,130,867). Claims 10, 11, 15, and 16 stand rejected under 35 U.S.C. § 103(a) under Hillhouse in view of Luke, and further in view of Jiang, "Online Fingerprint Template Improvement," (hereinafter Jiang).

These rejections are respectfully traversed in the following discussion.

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I. THE CLAIMED INVENTION

The claimed invention, as described by exemplary claim 2, is directed to a fingerprint authentication system including a fingerprint registration data section in which pieces of fingerprint data are registered, a fingerprint read section which reads one fingerprint data, a fingerprint collation section which inspects whether fingerprint data that matches or almost matches to the fingerprint data read by the fingerprint read section is registered in the fingerprint registration data section, a control section which registers the fingerprint data read by the fingerprint read section in the fingerprint registration data section additionally to the fingerprint data that is registered in the fingerprint registration data section and that matches or almost matches to the fingerprint data read by the fingerprint read section if the fingerprint data that matches or almost matches to the fingerprint data read by the fingerprint read section is registered in the fingerprint registration data section, and deletion sections for deleting the fingerprint data having a general similarity that is highest among the pieces of fingerprint data registered in the fingerprint registration data section, from the fingerprint registration section.

Conventional authentication technique using personal knowledge such as the password is easy to operate; the technique has disadvantages in that the personal knowledge tends to be forgotten and stolen. In order that particularly high authentication accuracy is to be realized, the number of figures should be increased, thereby disadvantageously, considerably deteriorating user-friendliness. (See Application at page 1, lines 15-22).

Also, conventionally, electronic commerce was intended for adults, fingerprint patterns of whom have less change. In contrast, the cellular phones are used even by children. Since children are in a growth process, their fingerprint sizes increase. As a result, it is difficult to collate fingerprint data on each child with fingerprint data previously registered. Further, in an environment in which a finger is worked too hard, a fingerprint of the finger is damaged

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and a fingerprint surface changes with the passage of time. As a result, there is a case where the fingerprint collation cannot be performed. (See Application at page 3, lines 13-25).

With the claimed invention, whenever authentication succeeds, one of the fingerprint data registered in the fingerprint registration data section is replaced by the fingerprint data input by the fingerprint read section, or the fingerprint data input by the fingerprint read section is added to the fingerprint data registered in the fingerprint registration data section. As a result, each time a user uses the system, the fingerprint data registered in the fingerprint registration data section changes. Therefore, it is possible to authenticate even fingerprint data on a child in a growth process without deteriorating authentication accuracy.

In addition, by deleting the fingerprint data having a high general similarity from the fingerprint registration data section, the fingerprint data having low general similarities are left in the fingerprint registration data section. This means that the fingerprint data having low mutual similarities are left in the fingerprint registration data section. Therefore, the fingerprint registration data section stores the fingerprint data various in patterns. Accordingly, the fingerprint of even the same person that changes in a various manners according to growth, seasons, and conditions can be detected with high accuracy. (See Application at page 5, lines 15-28 and page 6, lines 1-18).

II. THE PRIOR ART REFERENCE

A. The Rejections Based on Hillhouse and Luke

On page 4 of the Office Action, the Examiner alleges that Hillhouse and Luke teach the invention as claimed in claims 2-4, 6-8, 13, and 18. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Hillhouse or Luke, either alone or in combination.

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To establish a *prima facie* case of obviousness, several basic criteria must be met. First, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (*In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) cited with approval in *KSR Int'l. v. Teleflex, Inc.*, 127 S.Ct. 1727 (2007)). In addition, the prior art reference (or references when combined) must still teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

First, on page 5 of the Office Action, the Examiner admits that Hillhouse does not teach "*deletion means for deleting the fingerprint data having a general similarity that is highest among the pieces of fingerprint data registered in the fingerprint registration data section, from the fingerprint registration section.*" as recited in independent claim 2, and as similarly recited in independent claim 6.

The Examiner then alleges that Luke makes up for Hillhouse's deficiency. Contrary to the Examiner's allegations, however, Luke teaches deletion, that is, "deleting duplicate Information Components while retaining at least one copy of each Information Component within the information management system's physical data storage, and updating the index," to reflect the location, "corresponding to the positions of the retained copies and deleted copies." See Luke, Col. 2, Line 65 to Col. 3, Line 7. Luke, therefore, deletes duplicate files and memorizes the positions of these copies.

Thus, contrary to the Examiner's allegation that Luke specifically teaches the limitations of claim 2 of "*deletion means for deleting the fingerprint data having a general similarity that is highest among the pieces of fingerprint data registered in the fingerprint registration data section, from the fingerprint registration section.*" Luke can only teach the concept of generally deleting files. That is, Luke does not teach or suggest what duplicate

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files are deleted or in what order the files are deleted. Furthermore, Luke does not teach or suggest, deleting files that have "a general similarity that is highest among the pieces of fingerprint data," as recited in independent claim 2, and as similarly recited in independent claim 6.

Furthermore, Hillhouse teaches against the present invention. First, at paragraph [0069], Hillhouse teaches that the oldest digital representation is deleted, not one with the highest general similarity, as recited in claims 2 and 6. Indeed, where Hillhouse attempts to deal with full databanks, as in paragraphs [0079 and 0080], Hillhouse otherwise teaches reenrolling a user. That is, Hillhouse teaches that a user simply reenroll to avoid slowly drifting biometric data and not delete the data with highest similarity, as claimed in claims 2 and 6.

In addition, Luke teaches the deletion of duplicate files while neither the claimed invention nor the primary reference teach or suggest the deletion of duplicate files. That is, claims 2 and 6 recite, among other things, that files with a "highest general similarity," are deleted. Hillhouse also teaches that the oldest files are deleted. *See* Hillhouse, Paragraph [0069]. Accordingly, the Examiner has improperly combined the duplicate deletions as taught by Luke with Hillhouse to allegedly teach the present invention.

Thus, neither Hillhouse nor Luke teach or suggest "*deletion means for deleting the fingerprint data having a general similarity that is highest among the pieces of fingerprint data registered in the fingerprint registration data section, from the fingerprint registration section*," as recited in independent claim 2, or as similarly recited in independent claim 6. Therefore, independent claims 2 and 6 are improperly rejected in light of Hillhouse and Luke. Accordingly, Applicant submits that claims 2 and 6 are in condition for allowance.

With respect to claims 3, 4, 8, 10, 11, 13, 15, 16, and 18 which depend from

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Independent claims 2 and 6, respectively, each of these claims contains all the limitations contained within independent claims 2 and 6 and are therefore also in condition for allowance.

Furthermore, with respect to page 6 of the Office Action where the Examiner alleges that claims 10, 11, 15, and 16 are taught by Hillhouse, Luke, and Jiang, none of the cited references makes up for the admitted deficiency of Hillhouse with respect to the elements of their respective independent claims.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw these rejections.

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III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 2-4, 6, 8, 10, 11, 13, 15, 16, and 18, all the claims presently being examined in the application, are patentably distinct over the prior art of record and are in condition for allowance and that the withdrawn claims are in condition for rejoinder. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 7/10/08



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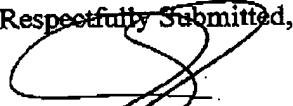
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FACSIMILE TRANSMISSION

I hereby certify that I am filing this paper via facsimile, to Group Art Unit 2132, at (571) 273-8300, on July 10, 2008.

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